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Certification

This statement was prepared by me or under my direction. All assertions contained in the statement are true of my own personal knowledge except where otherwise indicated and these latter assertions are believed to be true.



John F.X. Browne, P.E.
June 11, 1997

APPENDIX B



ENGINEERING STATEMENT

of

John F.X. Browne, P.E.

re

WGAL-TV

Lancaster, PA

This engineering statement has been prepared on behalf of Pulitzer Broadcasting Co., licensee of WGAL-TV, Lancaster, PA. WGAL is authorized to operate on TV Channel 8.

In its Fifth Report & Order and Sixth Report & Order (MM Docket 87-268) the Commission established the Rules & Regulations governing the new Digital Television Service (DTV) including a new table of channel allotments for DTV.

We have analyzed the new table with respect to interference to the existing service rendered by WGAL. This analysis indicates that there will be significant new interference to WGAL from new DTV facilities resulting in the loss of viewers and a significant reduction in the effective size of its service area.

This interference results primarily from an assignment of VHF Channel 8 – co-channel with WGAL's NTSC service – to WMBC, Newton (NJ) as its DTV allotment. Interference from this facility extends well into the WGAL service area, particularly into Schuylkill, Lebanon, Berks and Chester counties. Additional interference will be caused by the assignment of Channel 8 as the DTV facility of WICZ-TV, Binghamton, NY. The interference is in excess of 600 sq km, in total, based on the Commission's prediction methodologies.

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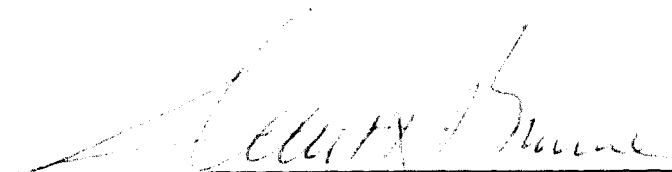
These two stations, WMBC and WICZ, are presently operating on UHF channels with moderate facilities; the allotted DTV facilities on Channel 8 for each station are of very low power, 3.2 kW in each case. An additional concern is that either or both of these stations will be requesting additional power or maximization which would further derogate the service rendered by WGAL-TV. It is noted that the allotment to WMBC at Newton, NJ, is 202 km distant from WGAL, considerably less than the minimum distance specified in the Rules (for new DTV allotments) of 245 km.

Conclusion

The assignment of DTV facilities on Channel 8 will have a serious impact on the NTSC service of WGAL-TV and the Commission should identify suitable alternatives for these facilities.

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A handwritten signature in dark ink, appearing to read "John F.X. Browne", is written over a horizontal line.

John F.X. Browne, P.E.
June 12, 1997

APPENDIX C



ENGINEERING STATEMENT

of

John F. X. Browne, P.E.

on behalf of

Pulitzer Broadcasting Company

The Commission has created what is, in practical effect, a directional antenna pattern for each new DTV allotment. This is the result of the replication methodology whereby the new F50,50 Grade B contour for each existing NTSC station (based on terrain along 360 radials instead of the formerly employed 8 radials) is replicated by an F50,90-based contour. A new "reference power" is created for each radial; since this ERP varies with azimuth due to terrain considerations and the use of the F50,90 curves, the result is a directional power (or antenna) pattern. The ERP value listed in the allotment table is the maximum value in the set of "reference ERP" values.

The Commission employed these sets of "reference ERP's" to predict DTV service and interference using the Longley Rice propagation model. An NTSC licensee currently employing an omnidirectional transmitting antenna may mistakenly believe that it can use an omnidirectional antenna at the ERP stated in the allotment table for its DTV facility when, in fact, doing so would cause the radial-by-radial ERP values used by the Commission (the "reference ERP's") to be exceeded in one or more azimuths.

The options provided by the Commission's new Rules seem to include

- using an omnidirectional antenna having an ERP which is the

- providing an interference showing demonstrating that, if an omnidirectional antenna is proposed and reference ERP values are thereby exceeded in some directions, no new interference would be created, or
- if theoretical interference would be created, demonstrating that the victim station(s) have agreed to accept such interference
- Using a directional antenna which matches the pattern established by the Commission.

Commenting briefly on these options it can be stated that

- using an omnidirectional antenna operating at the minimum reference ERP value may have serious consequences for some stations (in excess of 3 dB "penalty" or half-power).
- due to the considerable amount of "built-in" interference in the allotment table (in part, the result of eliminating 18 channels to form the available "core spectrum"), making a showing demonstrating that no new interference^{2/} would be created will be extremely difficult.
- obtaining agreements from affected stations may require a long, expensive negotiation process with no pre-ordained guarantee of success.
- the required directional antenna characteristics will, in most cases, not match standard or practically achievable patterns available from manufacturers resulting in a compromised approach (with lower power required in some azimuths).

Pulitzer Broadcasting and its affiliated companies own and operate 12 TV stations. A sampling of those stations are listed below along with the impacts created by this directional antenna phenomenon. Note that the estimations of the likelihood of creating new interference are based on interpretation of the Commission's Rules (rather than the prescribed use of OET-69 to evaluate interference, since that document is not yet available).

^{2/} While not clearly defined in the Rules, new interference is presumed to mean any increase in area predicted to receive interference.

Omni Directional Operation

Call	Station	Allotted Power (kW)	Omni. Power (kW)	New Interference (Omni at Max Power)
WLKY	Louisville	153	128.5	WTJC, WATE-DTV
WESH	Daytona	45	40.5	WINK, WTLV, WTSP, WTOC
KOAT	Albuquerque	88	30	KNAT, KNAT- DTV, KNME-DTV, KAZQ-DTV
WYFF	Greenville	1000	700	WASV, WUNG, WFVT, WHNS-DTV, WUNC-DTV, WLOS-DTV, WCBD-DTV, WGGG-DTV, WJHL-DTV
WXII	Winston-Salem	771	617	WUNU, WSLS-DTV, WFXR
WGAL	Lancaster	366	322	WBAL-DTV, WNUV, WNJB, WBPH, WBPH-DTV, WHTM-DTV, WDTV-DTV, WSHE

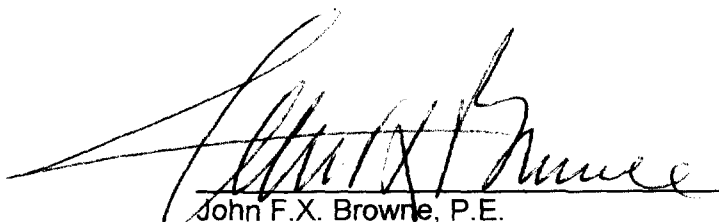
Conclusion

The Commission should address the apparent anomalies created by the establishment of a table of "reference ERP" values which may, in some cases, preclude some stations presently employing an omni-directional antenna from doing so with their DTV facilities.

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John F.X. Browne, P.E.
June 11, 1997

APPENDIX D



ENGINEERING STATEMENT

of

John F. X. Browne, P.E.

in Support of

Petition for Reconsideration

KOFT-TV Gallup, NM

KOAT-TV, Inc., a subsidiary of Pulitzer Broadcasting Company, is the licensee of KOFT-TV Gallup, NM. In a recent proceeding the Commission granted a request to change the city of license from Gallup to Farmington, NM. The licensee subsequently filed an application for construction permit to effect the move (BMPCT-960408KF). That application had not been granted as of the Commission's April 3, 1997 database which was used as the final reference for making DTV allotments to licensed and granted facilities.

KOFT DTV Allotment

KOFT-TV was allotted Channel 8 for DTV service at Gallup with an ERP of 3.2 kw. Since the NTSC facility is to be relocated to Farmington, the DTV allotment must also be changed.

A study has been conducted on the reference coordinates of

36-41-48	North Latitude
108-10-39	West Longitude

which is the site specified in the pending application to relocate KOFT, Channel 3, to Farmington.

It can be concluded from the study that the relocation of Channel 8 as a DTV allotment from Gallup to Farmington can be achieved with de minimus interference to KJCT^{1/}. As shown in Figure 1, a new interference area of 3 sq km with zero population would be created. This is subject to verification upon issuance of Bulletin OET-69.

^{1/} The relocation would not meet the Commission's requirements for a new co-channel DTV allotment with respect to KJCT, Grand Junction, CO (short 12.5 km out of a required 273.6 km). See Figure 2.

**Conclusion**

The Channel 8 DTV allotment associated with the KOVT, Channel 3, Gallup (NM) NTSC facilities can be relocated with the NTSC facilities to Farmington.

The new allotment should be:

Farmington, NM	Channel 8 (DTV)
Antenna Height (HAAT)	138 m
Non-directional Effective Radiated Power	3.2 kW
Location	36-41-48 North Latitude
	108-10-39 West Longitude

The Channel 8 DTV allotment at Gallup should be deleted.

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John F.X. Browne, P.E.
June 12, 1997

Figure 1

Message Segment (/taservice/restart/RS274Jun1297B.desc):

NTSC/DTV Interference study /taservice/restart/RS274Jun1297B.desc

Undesired Station Name: DKOFT Station Type: HDTV

City: GALLUP State: NM Channel: 8

Desired Station 1 Name: KCFG Station Type: NTSC

City: FLAGSTAFF State: AZ Channel: 9 km:347.5 mi:215.9

Bear: 243.3

Desired Station 2 Name: KJCT Station Type: NTSC

City: GRAND JUNC State: CO Channel: 8 km:261.5 mi:162.5

Bear: 358.6

Desired Station 3 Name: KTSC Station Type: NTSC

City: PUEBLO State: CO Channel: 8 km:369.9 mi:229.9

Bear: 51.0

Stations that are actually interfered with.

Name	NTSC Int	HDTV Int
KJCT	.00 sq km	2.91 sq km

Signal below minimum

Area: 287640. sq km

Population: 1370000.

Households: 483000.

Interference

Area: 0. sq km

Population: 0.

Households: 0.

No Interference

Area: 15020. sq km

Population: 108000.

Households: 41000.

John F.X. Browne & Associates, Inc.
Bloomfield Hills, Michigan

Page 1

June 12, 1997

TITLE: Pulitzer
Channel 8 Zone II
Database: DW 05/21/97

Latitude: 36-41-48
Longitude: 108-10-39
Safety zone: 120 km

Call	Auth	Licensee name	Chan	ERP	HAAT-m	Latitude	BR-to	Dist.	Req.
City of License	St	FCC File No.	Zone	(kW)	HAMSL	Longitude	-from	(km)	(km)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
KOAT-TV	LIC	PULITZER BROADCASTING	7 +	87.1	1292	35-12-53	136.2	226.5	146.4
ALBUQUERQUE	NM		II	DA	3300	106-27-01	317.2	80.09	CLEAR
DA: RCA Corporation ODD861103KJ @ 0 deg;									
KOFT			8 D	3.20	33	35-32-29	201.7	137.9	273.6
GALLUP	NM		II		2092	108-44-31	21.4	-136	SHORT
DOC-87-268; DTV Channel;									
ALLOC			* 8 -			35-31-30	201.4	139.6	273.6
GALLUP	NM		II			108-44-30	21.1	-134	SHORT
Filing window Closing date: ;									
KJCT	LIC	PIKES PEAK BROADCASTI	8 -	120	829	39-02-55	358.6	261.1	273.6
GRAND JUNCTION	CO	BLCT-791019KJ	II	DA	3060	108-15-06	178.6	-12.5	SHORT
BRCT-921201LP 1/27/97(43920-1/31/97); DA: RCA Corporation ODDKJCT @ 0 deg;									
KTSC	LIC	UNIV. OF SOUTHERN COL	* 8 o	316	372	38-22-25	58.6	370.1	273.6
PUEBLO	CO	BLET-270	II		1888	104-33-27	240.8	96.47	CLEAR
Horizontal polarization;									
KTSC	CP	UNIV. OF SOUTHERN COL	* 8 o	241	715	38-44-43	51.0	370.3	273.6
PUEBLO	CO	BPET-900122KE	II	DABT	2966	104-51-41	233.0	96.70	CLEAR
CP Granted 03/30/93 Per FCC release #21608 dated 04/07/93; CP Granted 03/30/93									
Per FCC release #21608 dated 04/07/93; BMPET-930216KE EXT(15471-3/2/93); Elec									
trical BT: .80 degrees; Horizontal polarization; DA: Jampro ODD900122KE @ 0 d									
eg;									
KTSC	APP	UNIV. OF SOUTHERN COL	* 8 o	241	715	38-44-43	51.0	370.3	273.6
PUEBLO	CO	BPET-931129KE	II	DABT	2966	104-51-41	233.0	96.70	CLEAR
Electrical BT: .80 degrees; Elliptical polarization; DA: Dielectric ODD931129									
KE @ 0 deg;									
NEW	APP	BD REGENTS - UNIV OF	* 9 +	316	610	35-46-50	124.0	179.9	146.4
SANTA FE	NM	BPET-961001KJ	II	BT	3087	106-31-35	305.0	33.46	CLEAR
Electrical BT: .80 degrees; Circular polarization; Ant: Dielectric TCL-14A9;									
NEW	APP	COMMUNITY TV EDUCATOR	* 9 +	63.0	1259	35-12-55	136.1	226.4	146.4
SANTA FE	NM	BPET-960923KE	II		3275	106-27-01	317.2	80.04	CLEAR
Horizontal polarization; Ant: Bogner B6V0;									
ALLOC			* 9 +			35-40-48	118.8	230.3	146.4
SANTA FE	NM		II			105-56-42	300.1	83.88	CLEAR
Filing window Closing date: ;									

>> End of Channel 8 Study <<